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ABSTRACT

Patterns of delay in entering 4-year, 2-year, and less-than-2-year postsecondary institutions (PIs) for 1972, 1980, and 1982 high school graduates are described. Two types of delay were studied: (1) delay in beginning at a particular type of institution, and (2) stopping out for a period before returning (i.e., leaving school for over 2 months or a summer period and returning to school afterwards). This report uses information about the educational progress of 1972 seniors from the National Longitudinal Study and information from the 1980 senior and sophomore cohorts of the High School and Beyond Study. The data are taken from all years between the graduating year and February of 1986, when the last follow-up survey was conducted on each cohort. Over 40% of the high school graduates had enrolled in 4-year institutions by 1986, about 30% enrolled in 2-year institutions, and about 10% enrolled in less-than-2-year institutions. More students in 4-year institutions entered during the fall term after high school graduation than did students in other types of PIs. Delayed entry was most common for students in less-than-2-year institutions, and this was true for students from all three cohorts, regardless of gender or socioeconomic status (SES). Students from high SES backgrounds were less likely to delay entry into 4-year institutions than were other students, and a higher proportion of low SES students in 4-year institutions delayed entry than did either medium or high SES students. There was no consistent relationship between gender and the likelihood of delay among students at any PI. The combined rate of degree attainment and upward transfer was higher for students who entered postsecondary education immediately after high school than for students who delayed entering postsecondary education. At non-4-year institutions, attainment rates for stopouts were consistently lower than for delayed entrants. Four bar graphs and five data tables are provided. A discussion of the methodology and technical notes, a glossary, and supporting tables are included. (RLC)

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Survey Report

January 1990

National Longitudinal Study 1972
High School and Beyond

Patterns and Consequences of Delay in Postsecondary Education: 1972, 1980, and 1982 High School Graduates

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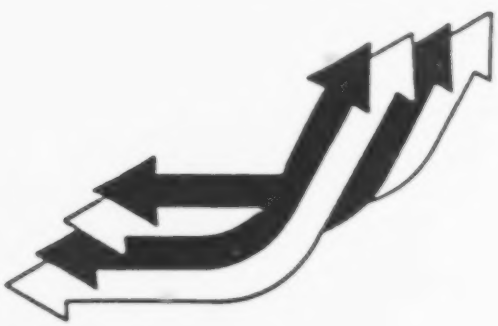

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January 1990

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Highlights

This report describes the patterns of delay in entering 4-year, 2-year, and less-than-2-year postsecondary institutions for 1972, 1980, and 1982 high school graduates. Two types of delay were studied: delay in beginning at a particular type of institution and stopping out for a period of time before returning. A few of the major highlights are as follows:

- A higher proportion of students in 4-year institutions entered during the fall term following high school graduation than did students in other types of postsecondary institutions. This was true for students in all three graduating classes, regardless of gender or socioeconomic status.

- Delayed entry was most common for students in less-than-2-year institutions for students from all three cohorts, regardless of gender or socioeconomic status. The average length of delay was also longer for students at less-than-2-year institutions.

- In all three cohorts, students from high socioeconomic status backgrounds were less likely to delay entry into 4-year institutions than other students.

- In all three cohorts, a higher proportion of low SES students in 4-year institutions delayed entry than did either medium or high SES students.

- A smaller percentage of low SES students than medium or high SES students transferred to 4-year institutions after first enrolling in non-4-year institutions immediately after graduation.

- There was no consistent relationship between gender and the likelihood of delay among students at any postsecondary institution.

- There was no relationship between socioeconomic status and the likelihood of stopping out from non-4-year institutions; for students enrolling in 4-year institutions from the 1980 and 1982 cohort, however, graduates of high socioeconomic status were more likely to stop out than other students.

- There was no relationship between time of entry and stopping out, except that fewer delayed entrants than immediate entrants stopped out from 4-year institutions in all three cohorts.

- For all three cohorts and for all types of postsecondary institutions, the combined rate of degree attainment and upward transfer was higher for students who entered postsecondary education immeidiately after high school than for students who delayed entering postsecondary education.

- At non-4-year institutions, attainment rates for stopouts were consistently lower than for delayed entrants.

- Attainment rates for students in the highest SES quartile at 4-year institutions were higher than for other students. This difference was found for students with similar enrollment patterns.

Foreword

This report uses information about the educational progress of 1972 seniors from the National Longitudinal Study as well as information from the 1980 senior and sophomore cohorts of the High School and Beyond Study. This report draws on information from National Longitudinal Study's base-year (1972), first follow-up (1973), second follow-up (1974), third follow-up (1976), fourth follow-up (1979), and fifth follow-up (1986) surveys, as well as the Postsecondary Education Transcript Study (1984). It also draws on information from High School and Beyond's base-year (1980), first follow-up (1982), second follow-up (1984), third follow-up (1986). This report compares the patterns and consequences of delay in postsecondary education for all three cohorts from their high school graduation until 1986.

The NLS-72 and HS&B data are a rich source of information on the activities of high school graduates, the consequences of alternative choices during young adulthood, and outcomes from these choices during early middle age. This report demonstrates the breadth of these data in the area of postsecondary education. Due to limitations of space, the analysis is restricted to a few important subgroups—sex, race, and socioeconomic status. Many other subgroups deserve attention. Variation in outcomes according to high school test scores, high school grade averages, home language, plans for postsecondary education, and family size, among others, can and should be examined in more detail.

We hope that this report will inspire other researchers to use these data to pursue their own interests. The National Center for Education Statistics (NCES) has computer tapes available to those wishing to carry out their own analysis of special questions and issues. NCES also maintains a large set of summary statistics in a microcomputer database. Statistics contained in the database cover the same topics described in this report but in much greater detail.

Information about obtaining NLS-72 or HS&B computer tapes is available from the U.S. Department of Education, Office of Educational Research and Improvement, Information Technology Branch, 555 New Jersey Avenue, N.W., Room 215, Capitol Place Building, Washington, D.C. 20208-1227.

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Introduction

The traditional postsecondary enrollment pattern is to enter college immediately after high school graduation and to remain enrolled full-time durign each academic year until a degree is attained. However, this enrollment pattern is changing. Of the students who were high school sophomores in 1980 and entered postsecondary education by 1986, 73 percent had enrolled by October of 1982, the fall after their graduation. Of these immediate entrants, only 35 percent were continuously enrolled for four years: 11 percent left school for a term or more and returned later, while 54 percent had left and had not returned to school by February 1986.[1] It is clear from these findings that the "traditional" postsecondary enrollment pattern does not characterize the majority of students.

The diversity of enrollment patterns stems from a number of sources. Vocational schools and 2-year colleges offer certificates and degrees that are sought as vehicles to specific employment, and students who receive such degrees and certificates can achieve their educational goals in less than four years. Students also have the option of transferring among different types of postsecondary institutions. One pattern of progression is to enroll in a 2-year institution and then to transfer to a 4-year institution after as much as two years of courses have been completed. Students who follow this pattern will be delayed entrants into 4-year institutions. Other students delay entry to any postsecondary education in order to work, travel, serve in the military, and have families.

Whether students enter immediately after high school, wait awhile before beginning their postsecondary education, or transfer among institutions, students may vary from the traditional pattern of continuous enrollment by leaving school for a time to work and re-enrolling after a year or so. This phenomenon, known as "stopping out" of postsecondary education, is distinguished from dropping out: the "stopout" leaves school and returns again, while the dropout leaves school permanently. Delays and gaps in enrollment may be due to difficulties with finances, changes in expectations about the necessity or desirability of a 4-year degree, or changes in attitudes about the timing of postsecondary education and early employment experiences.

This report examines two types of nontraditional enrollment patterns, both of which involve some type of delay in postsecondary education. The first type of delay is delayed entry, when students do not proceed immediately from high school to postsecondary education. This analysis defines delayed entry as enrollment later than October of the high school graduation year. The second type of delay is stopping out, defined here as the practice of leaving school for more than two months or a summer period and returning to school after that break.

In most analysis of student enrollment patterns, delay is defined from the student's perspective. For example, students are classified into two mutually exclusive categories on the basis of their time of entry: immediate entry for those who enroll in postsecondary education during the fall after high school graduation and delayed entry for those who enroll after that time. Similarly, students are classified as stopouts if they leave school for awhile and as continuous enrollees is they have no gaps in their enrollment.

In contrast to a student-oriented analysis, this report examines delay in postsecondary education from an institutional perspective. That perspective classifies students' enrollment

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[1] Some of these students left after attaining 1-year or 2-year degrees, but most had received no degree before leaving.

with respect to the institution type as well as their time of entry or the continuity of their enrollment. Students at 4-year, 2-year, and less-than-2-year institutions are always examined separately. Thus students are classifed as immediate entrants to 4-year institutions, stopouts from 2-year institutions, and so on. Students who attend more than one type of postsecondary institution provide data for two different institutional perspectives. For example, the institutional perspective requires that students who enter 2-year institutions directly after high school and transfer to 4-year institutions after a short time be classified both as immediate entrants into 2-year institutions and as delayed entrants into 4-year institutions. It is unlikely that such a student would transfer back to a 2-year institution, but if that should occur then the institutional perspective calls for that student to be classified as a stopout from a 2-year institution. If, in an even more unlikely scenario, the student then returned to a 4-year institution, the institutional perspective would require that student qualify as well for a fourth category: stopout from a 4-year institution.

These definitions of delay may present some difficulty for those accustomed to a student-oriented measure. For example, a student who is continuously enrolled but transfers from 4-year to 2-year institution and back to a 4-year institution will be considered a "continuous enrollee" from a student perspective and a "stopout from a 4-year institution" from the institutional perspective. It may be especially difficult to accept the institutional perspective when "delayed entrants" consist partly of immediate entrants into 2-year institutions who transferred to 4-year institutions. This is the most common pattern of transfer, representing between around six percent of all 4-year students.[2] Since this is the largest class of students for whom their status from an institutional perspective conflicts with their status from a student-oriented perspective, transfers into 4-year institutions are discussed in a subsection of the report as a special case. To assist the reader in understanding the report, Appendix B provides a glossary that includes definitions of all the variables used in the analysis.[3]

This report examines delay in postsecondary education for the high school graduating classes of 1972, 1980, and 1982. The data on the 1980 and 1982 graduates are part of the High School and Beyond surveys made of 1980 high school seniors and sophomores. The High School and Beyond study began in 1980 with samples of both cohorts. These students were re-interviewed in 1982, 1984, and 1986. The data on the 1972 graduates are part of the National Longitudinal Study of the High School Class of 1972 (NLS-72). The NLS-72 survey was conducted in 1972 on a sample of high school seniors. These students were re-interviewed in 1973, 1974, 1976, 1979, and 1986. The data for this report are taken from all of the years between the high school graduating year and February of 1986, when the last follow-up survey was conducted on each of the three cohorts.[4]

Although the data presented in this report describe delay in postsecondary education for three different high school cohorts, these data do not support comparisons among these cohorts to determine trends over time. The findings shown in this report have not been standardized to account for the fact that the 1972 graduates have been out of high school for a decade longer than the 1982 graduates and eight years longer than the 1980 graduates. Since only the 1972 graduates had the opportunity to enter postsecondary education after delays of more than six years, it is not surprising that their total rates of delay in

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[2] This transfer pattern characterized seven percent of 1972 graduates, six percent of 1980 graduates, and five percent of 1982 graduates.

[3] For a student-centered analysis of delayed entry and persistence of enrollment among the 1982 graduating class, see Eagle et al, *A Descriptive Report of 1980 High School Sophomores: Six Year Later*, June 1988, CS 88-405, pp.8-10.

[4] For more information on the data used for this analysis, see Appendix A.

postsecondary education were substantially higher at the time of the 1986 survey than the rates for 1980 or 1982 graduates. Similarly, rates of delay for 1980 graduates are somewhat higher than those for 1982 graduates. It is not possible to tell what proportion of these differences is due to the greater passage of time for the older cohorts compared to the younger and what proportion of the differences may actually reflect changes in student behavior over time.

Rather than reporting inter-cohort differences, this report makes comparisons between students from the same cohort at different types of postsecondary institutions. In addition, it discusses differences between males and females in patterns of delay and differences among students of different socioeconomic status.[5] Data from three different cohorts are used to verify findings in more than one sample. When such differences are found among all three cohorts, despite their stages in the life cycle, then these differences are persistent over time and may well continue.

This report begins with a section on enrollment in postsecondary education. To ground the discussion in the institutional perspective, this section shows the proportion of each graduating class who actually enrolled in different types of postsecondary education. For all succeeding sections of the report, findings are presented as proportions of students who enrolled at different types of postsecondary institutions. The second section of the report discusses the incidence of delayed entry at each type of institution, while the third section discusses the incidence of stopping out at each institution type. The relationship between these two types of delay is explored in the third section, again shown separately for different types of institutions. Finally, the fourth section of the report investigates the relationship between delay and attainment at each type of postsecondary institution.

Enrollment in Postsecondary Education

Because enrollment in a particular type of institution serves as the basis for all percentages in this report, this section provides some background information on postsecondary enrollment by school for each cohort. In the three cohorts studied, about two-thirds of the high school graduates had enrolled in some form of postsecondary education by 1986: 68 percent of 1972 graduates, 71 percent of 1980 graduates, and 67 percent of 1982 graduates. (See Table 1.)

As shown in Table 1, 4-year institutions attracted the highest proportion of each graduating class, while less-than-2-year institutions attracted the lowest proportion. While it is not the task of this report to discuss participation rates in the different types of postsecondary institutions, it is worth noting that the small number of students in less-than-2-year institutions limits the level of detail at which that population can be analyzed. Fortunately, the institutional perspective permits a larger sample, since students who attended more than one type of institution contributed data for analysis of each school type they attended.

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[5] Students were divided into three categories by their percentile ranking on a composite measure of socioeconomic status. Students with low SES are those in the bottom quartile, while those with high SES are those in the top quartile. The middle SES category includes those students ranked between the twenty-fifth and the seventy-fifth percentiles. For more information on this index, see John Riccobono, *et al, National Longitudinal Study: Base Year (1972) through Fourth Follow-Up (1979) Data File Users Manual*, Appendix K, Volume II, June 1981.

Table 1.--Enrollment in postsecondary institutions: Percent of 1972, 1980, and 1982 high school graduates enrolled by 1986

	Percent of graduates who ever enrolled in†			
	Any postsecondary education	Less-than 2-year institutions	2-year institutions	4-year institutions
All 1972 graduates	68	9	30	48
Male	69	9	29	50
Female	67	9	31	46
Low SES	48	9	23	26
Medium SES	66	10	31	43
High SES	91	8	35	76
All 1980 graduates	71	13	30	46
Male	69	11	28	46
Female	73	15	31	46
Low SES	55	15	24	26
Medium SES	71	14	31	43
High SES	91	10	33	74
All 1982 graduates	67	13	27	41
Male	64	11	24	41
Female	70	15	29	41
Low SES	44	14	20	18
Medium SES	67	16	29	36
High SES	88	8	30	70

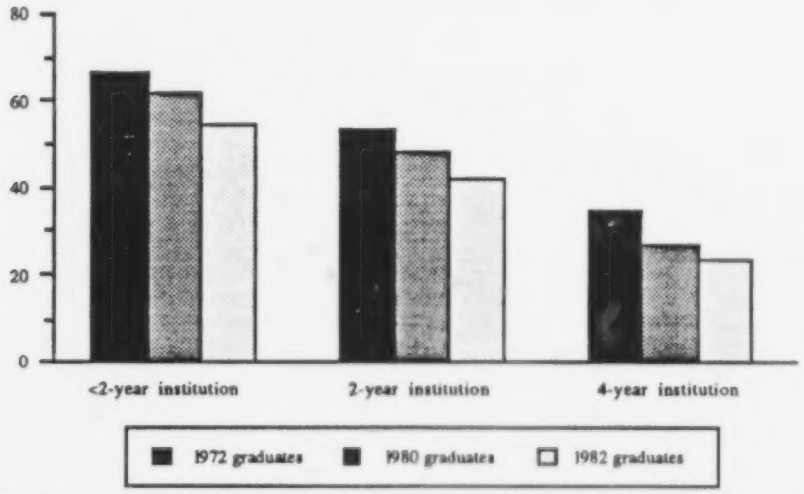
†A number of students attended more than one type of school, accounting for the difference between the percent enrolled in any postsecondary education and the sum of the percent enrolled in each of the three institution types.

SOURCE: NLS-72, 1986 and HS&B, 1986

Delayed Entry into Postsecondary Education

Late entry was the most common type of delay in postsecondary education for 1972, 1980, and 1982 high school graduates. This section compares the rates of delayed entry for students from each cohort who enrolled in 4-year, 2-year, and less-than-2-year institutions. Rates of delay for males and females are also compared for entrants into each type of institution, as are the rates of delay for students of different socioeconomic status. Students who delayed entry into 4-year institutions after immediate entry into other types of institutions are discussed separately, although they are included among all delayed entrants for 4-year institutions. Finally, the average length of delay for students at each type of institution is compared for students in each graduating class.

Figure 1.--Rates of delayed entry into postsecondary institutions for 1972, 1980, and 1982 high school graduates by 1986 †



† The percent of students with delayed entry is lower for cohorts who graduated from high school later.

SOURCE: NLS-72, 1986 and HS&B, 1986

Figure 1 shows the proportion of students enrolling in each type of postsecondary institution who delayed entry into that type of institution. Among 1972, 1980, and 1982 graduates, delayed entry was most common among students who enrolled in less-than-2-year institutions and least common among those who enrolled in 4-year institutions.[6] Among 1972 graduates who entered less-than-2-year institutions, 66 percent began at that type of institution later than October 1972. Among 1972 graduates who entered 2-year institutions, 54 percent began at that type of institution later than October 1972. Among 1972 graduates who entered 4-year institutions, 35 percent began at that type of institution later than October 1972. The 1980 and 1982 cohorts were also more likely to delay entering non-4-year institutions than to delay entering 4-year institutions. Among the 1980 graduates, 62 percent of entrants to less-than-2-year institutions, 48 percent of entrants to

[6] Differences among groups reported throughout the text were evaluated using a two-tailed t–test. Unless otherwise noted, differences reported were significant to the $p \leq .05$ level for each family of tests. An

2-year institutions, and 27 percent of entrants to 4-year institutions delayed initial entry. Among 1982 graduates, the rates of delayed entry were 55 percent of entrants to less-than-2-year institutions, 42 percent of entrants to 2-year institutions, and 24 percent of entrants to 4-year institutions delayed initial entry.[7]

Rates of Delay for Different Types of Students

There were few differences in the rate of delayed entry between men and women at particular types of institutions. (See Table 2.)

Table 2.--Rates of delayed entry into postsecondary institutions for 1972, 1980, and 1982 high school graduates, by sex and SES

	Delayed entry at less-than 2-year institutions	Delayed entry at 2-year institutions	Delayed entry at 4-year institutions
All 1972 graduates	66	54	35
Male	71	52	34
Female	62	56	36
Low SES	67	61	51
Medium SES	62	53	38
High SES	76	51	26
All 1980 graduates	62	48	27
Male	64	48	29
Female	60	48	25
Low SES	63	47	34
Medium SES	59	47	28
High SES	68	48	21
All 1982 graduates	55	42	24
Male	55	44	25
Female	55	41	23
Low SES	49	50	32
Medium SES	58	41	28
High SES	55	41	18

SOURCE: NLS-72, 1986 and HS&B, 1986

explanation of the procedure used, as well as standard errors for all tables and figures, is given in the technical appendix to this report.

[7] This relationship between institution type and rate of delay was consistent across categories of sex and socioeconomic status.

The only significant differences between men and women were the higher rates of delay for male than female 1972 graduates enrolling in less-than-2-year institutions (a delayed entry rate of 71 percent for men compared to 62 percent for women) and 1980 graduates enrolling in 4-year institutions (29 percent for men compared to 25 percent for women).

In all three cohorts, students of high socioeconomic status were less likely to delay entry into 4-year institutions than students of medium or low socioeconomic status. Twenty-six percent of the high SES 1972 graduates enrolling in 4-year institutions delayed entry, compared to 51 percent of their low SES peers. Similarly, 21 percent of the high SES 1980 graduates enrolling in 4-year institutions delayed entry, compared to 28 percent of their medium SES peers and 34 percent of their low SES peers. Among 1982 graduates, 18 percent of high SES students delayed entry to 4-year institutions, compared to 32 percent of low SES students.[8]

Transferring to 4-Year Institutions

In no cohort was there a high proportion of students who delayed entry into 4-year institutions but were immediate entrants into other types of institutions. Of those entering 4-year institutions, seven percent of 1972 graduates, six percent of 1980 graduates, and five percent of 1982 graduates had previously entered another type of institution immediately after high school graduation.

Figure 2 shows, for students in each cohort of different socioeconomic status, the proportion at 4-year institutions who had previously entered a 2-year or less-than-2-year institution directly out of high school. Very few of the 4-year students of low socioeconomic status had taken the route of immediate enrollment into a 2-year or less-than-2-year institution followed by entry into the 4-year institution. Of low SES 4-year enrollees, the proportion transferring from immediate entry into other types of institutions was three percent of the 1972 graduates, four percent of the 1980 graduates, and two percent of the 1982 graduates. For medium SES enrollees at 4-year institutions, the proportion who were such transfers was seven percent for both the 1972 and 1980 graduates and five percent for the 1982 graduates. For high SES students at 4-year institutions, the proportion was ten percent of 1972 graduates, eight percent of 1980 graduates, and seven percent of 1982 graduates.

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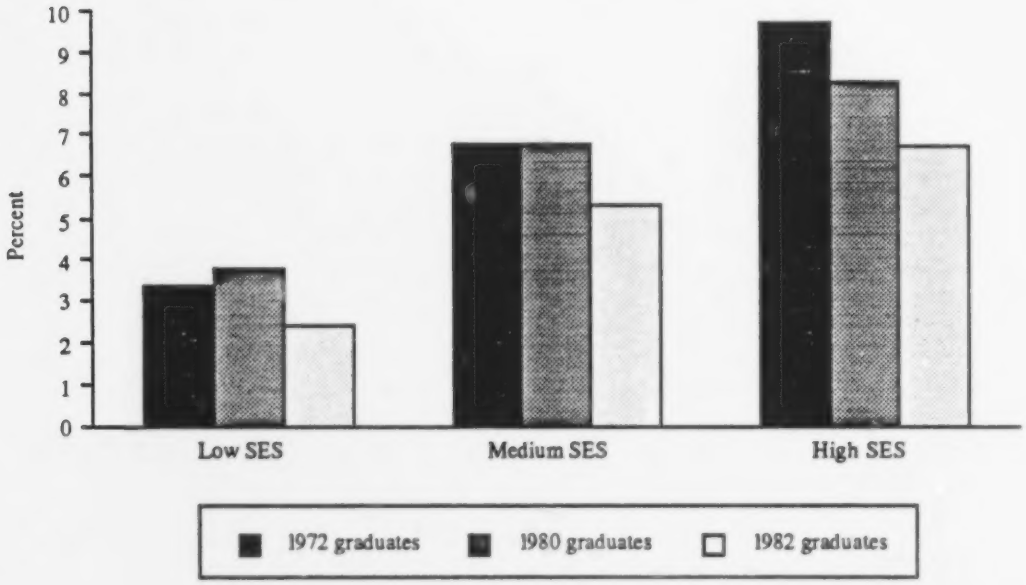
[8] It is worth remembering that it is inappropriate to make comparisons across cohorts from the data presented in Table 2, or any other table in this report. The 1982 high school graduates were last surveyed less than four years after high school graduation, while the 1972 high school graduates were last surveyed nearly fourteen years out of high school. Considering the longer time period in which they could have decided to start school, it is not surprising that for each type of institution a larger proportion of 1972 graduates than of 1982 (or 1980) graduates had enrolled as delayed entrants. This does not mean that the propensity to delay has increased over time or that rates of delayed enrollment have been going down. This type of comparison can only be made when we have fourteen years of experience chronicled for each cohort.

Figure 2.--Percent of students enrolling in 4-year institutions by 1986 with previous enrollment as immediate entrants to 2-year or less-than-2-year institutions: 1972, 1980, and 1982 high school graduates



SOURCE: NLS-72, 1986 and HS&B, 1986

Stopping Out in Postsecondary Education

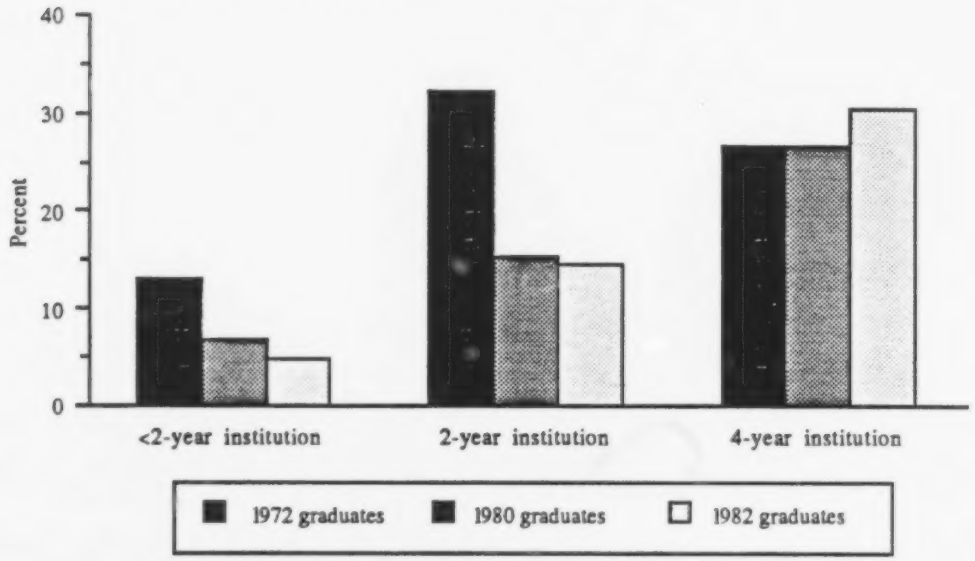
Another type of delay occurs when students "stop out" of school for a time before completing their program. Students who left a particular type of postsecondary institution to work, travel, have families, or even to attend a different type of postsecondary institution, were classified as "stopouts" if they left before completing their program but returned before 1986.[9] According to the student-oriented perspective, stopouts are those who left postsecondary education for a period of time, while those who enrolled for at least eight months of each academic year are described as "persistors." From the institutional perspective, students who leave a particular type of institution for another type and then return are classified as stopouts, even though they were continuously enrolled in some type of postsecondary institution. Thus the "stopouts" discussed below may include some students who spent some time away from a particular type of institution but continued their postsecondary education during that period of leave.

This section compares the rates of stopping out for students from each cohort who enrolled in 4-year, 2-year, and less-than-2-year institutions. Stopout rates for males and females are also compared for entrants into each type of institution, as are the stopout rates

[9] Program completion was defined according to the type of institution. Stopouts from 4-year institutions took their time off before they received their B.A. degrees. Stopouts from non-4-year institutions took their

for students of different socioeconomic status. The rate of stopping out from postsecondary institutions is shown in Figure 3 for 1972, 1980, and 1982 high school graduates.[10]

Figure 3.--Rates of stopping out from postsecondary institutions for 1972, 1980, and 1982 high school graduates



SOURCE: NLS-72, 1986 and HS&B, 1986

Stopping out from postsecondary education was least common for students from all three cohorts who entered less-than-2-year institutions. This is to be expected, since these institutions offer shorter programs. Thirteen percent of these students from the 1972 cohort stopped out, seven percent from the 1980 cohort, and five percent from the 1982 cohort. Among the members of the 1972 cohort, the highest stopout rate was at 2-year institutions: 32 percent compared to 27 percent at 4-year institutions and 13 percent at less-than-2-year institutions. For the later cohorts, however, the highest rate of stopout was for 4-year institutions. Twenty-seven percent of 1980 graduates and 30 percent of 1982 graduates stopped out from 4-year institutions, compared to the 15 percent of both 1980 and 1982 graduates who stopped out from 2-year institutions.

Stopout Rates for Different Types of Students

As shown in Table 3, both males and females in each cohort were least likely to stop out when attending a less-than-2-year institution. For example, of 1972 graduates, 14 percent of the males and 13 percent of the females stopped out from enrollment in less-than-2-year institutions. By comparison, 32 percent of males and 33 percent of females stopped out from enrollment in 2-year institutions, while 26 percent of males and 27 percent of females stopped out from enrollment in 4-year institutions. In no cohort was

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time off before they received an A.A. degree or a vocational certificate and before they transferred to a 4-year institution.

[10] These rates of stopping out apply to all students, regardless of their time of entry into postsecondary education.

there a significant difference between males and females in the likelihood of stopping out from a particular type of postsecondary institution.

Table 3.--Rates of stopping out from postsecondary institutions for 1972, 1980, and 1982 high school graduates, by different sex and socioeconomic status

	Less-than 2-year institutions	2-year institutions	4-year institutions
All 1972 graduates	13	32	27
Male	14	32	26
Female	13	33	27
Low SES	12	35	25
Medium SES	13	32	29
High SES	16	31	25
All 1980 graduates	7	15	27
Male	6	15	28
Female	7	16	26
Low SES	7	15	23
Medium SES	6	15	25
High SES	3	15	30
All 1982 graduates	5	15	30
Male	4	15	30
Female	5	15	31
Low SES	5	13	21
Medium SES	5	14	28
High SES	4	16	35

SOURCE: NLS-72, 1986 and HS&B, 1986

In all three cohorts, regardless of socioeconomic status, students were least likely to stop out when attending a less-than-2-year institution. For example, twelve percent of the 1972 graduates of low socioeconomic status stopped out from less-than-2-year institutions, compared to 35 percent from 2-year institutions and 25 percent from 4-year institutions. The comparable stopout rates for high SES students of the 1982 cohort were four percent for less-than-2-year institutions, 16 percent for 2-year institutions, and 35 percent for 4-year institutions. Table 3 shows the persistence of this pattern for each SES group in each cohort.

There was no relationship between socioeconomic status and the likelihood of stopping out from less-than-2-year or 2-year institutions in any of the cohorts. For 1972 graduates there was no relationship between socioeconomic status and stopping out from any type of institution. There was, however, a relationship between socioeconomic status and stopping out for students in 4-year institutions among the 1980 and 1982 graduates. For 1980 graduates, students of high socioeconomic status were more likely to stop out than other students: 30 percent compared to 25 percent of medium SES students and 23 percent of low SES students. For 1982 graduates, high SES students were more likely to stop out than medium SES students (35 percent compared to 28 percent), who were more likely to stop out than low SES students (28 percent compared to 21 percent).

The Relationship between Initial Delay and Stopping Out

There was no relationship between initial delay and stopping out among 1972, 1980, or 1982 graduates, except in 4-year institutions. For students in 2-year and less-than-2-year institutions, there was no significant difference in the stopout rate of delayed entrants as compared to immediate entrants. For students in 4-year institutions, fewer delayed entrants stopped out than immediate entrants: 24 percent versus 28 percent among 1972 graduates, 22 versus 28 percent among 1980 graduates, and 16 percent versus 35 percent among 1982 graduates. (See Table 4.)

Table 4.--Rates of stopping out from postsecondary institutions for immediate and delayed entrants: 1972, 1980, and 1982 high school graduates

	Less-than-2-year institutions		2-year institutions		4-year institutions	
	Immediate entrants	Delayed entrants	Immediate entrants	Delayed entrants	Immediate entrants	Delayed entrants
All 1972 graduates	11	14	32	32	28	24
Male	13	14	36	28	28	22
Female	9	14	29	35	29	25
Low SES	10	13	37	33	27	23
Medium SES	11	13	31	33	31	25
High SES	10	17	32	29	26	22
All 1980 graduates	9	6	15	15	28	22
Male	8	5	17	12	31	21
Female	9	6	14	18	26	24
Low SES	6	7	16	14	25	20
Medium SES	7	6	15	15	27	19
High SES	4	3	15	15	31	25
All 1982 graduates	4	5	16	13	35	16
Male	34	41	42	50	35	17
Female	35	41	43	58	36	15
Low SES	6	3	13	12	26	12
Medium SES	4	6	15	12	32	17
High SES	3	5	17	15	40	17

SOURCE: NLS-72, 1986 and HS&B, 1986

The Relationship between Delay and Attainment in Postsecondary Education

This section shows the relationship between delayed entry or stopping out and attainment in postsecondary education. Consistent with the other analysis presented in this report, attainment is defined from an institutional perspective. For students at 2-year or less-than-2-year institutions, attainment was defined as having received a vocational certificate, earned an Associate degree, or transferred to a 4-year institution. For students at 4-year institutions, attainment was defined as having received a Bachelor's degree.

At all types of postsecondary institutions studied for each cohort, those who delayed their postsecondary education had lower rates of attainment than those who did not delay.[11] Attainment at 4-year institutions was defined as having received a Bachelor's degree. Although the 1972 graduates have had fourteen years in which to complete their education, 59 percent of immediate entrants but only 38 percent of delayed entrants to less-than-2-year institutions had transferred to a 4-year institution or attained a degree. A similar pattern occurred among students at 2-year institutions, where the attainment rate for 1972 graduates was 51 percent for those who entered immediately and 14 percent for those who delayed entry.[12] Table 5 shows the attainment rates for 1972, 1980, and 1982 graduates who stopped out, delayed or entered immediately at each type of postsecondary institution at any time between their high school graduation and 1986.

At less-than-4-year institutions, attainment rates for students who stopped out from postsecondary education were consistently lower than attainment rates for delayed entrants. This was also true for 1972 graduates at 4-year institutions, but for 1980 graduates there was no statistically significant difference in the attainment rates of delayed entrants and stopouts from 4-year institutions.

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[11] Degree attainment at 4-year institutions was not analyzed for 1982 graduates, since the Third Follow-up Survey was conducted before even immediate entrants had completed four years of postsecondary education. The base for these percentages consisted of all students who entered the named type of institution with the pattern specified. Thus, the attainment rate for delayed entrants at 2-year institutions is the percentage of students who entered 2-year institutions after some delay who earned an A.A. degree or vocational certificate, or who transferred to a 4-year institution. The attainment rate for immediate entrants to 4-year institutions is the percentage of students who entered 4-year institutions immediately after high school who earned a bachelor's degree. Students were counted as "attainers" regardless of their stopout status or periods of enrollment at other types of institutions, so long as they did achieve the degree or transfer required by the definition above.

[12] These rates of attainment were calculated on the base of all entrants to the type of institution named, regardless of what other types of institution they attended.

Table 5.--Attainment in postsecondary institutions for immediate entrants, delayed entrants, and stopouts: 1972, 1980, and 1982 high school graduates†

	Less-than-2-year institutions			2-year institutions			4-year institutions		
	Immediate entrant	Delayed entrant	stopout	Immediate entrant	Delayed entrant	stopout	Immediate entrant	Delayed entrant	stopout
1972 graduates									
Total	59	38	17	51	26	14	67	44	34
Sex									
Male	61	39	12	48	29	16	69	47	36
Female	58	37	21	53	23	13	66	42	31
Socioeconomic status									
Low	51	35	17	45	26	12	60	32	30
Med	63	37	10	50	27	17	62	41	28
High	58	43	31	54	24	12	73	57	43
1980 graduates									
Total	59	50	10	53	22	14	49	25	21
Sex									
Male	49	47	2	51	24	14	48	27	20
Female	65	52	16	55	20	14	50	23	23
Socioeconomic status									
Low	53	38	5	44	21	14	35	14	15
Medium	63	56	10	53	21	11	42	25	18
High	65	49	+	60	26	21	59	33	29
1982 graduates									
Total	63	45	15	41	17	8	*	*	*
Sex									
Male	65	41	14	43	20	10	*	*	*
Female	61	48	16	41	15	7	*	*	*
Socioeconomic status									
Low	60	56	28	33	20	4	*	*	*
Medium	64	39	12	41	18	6	*	*	*
High	64	55	+	47	15	13	*	*	*

†The base for the percentages shown in this table includes all students who entered postsecondary education by 1986. No attempt was made to restrict the sample to students with comparable time periods for attainment of degrees.

*Estimates are not reported for 1982 graduates at 4-year institutions, since the last survey was taken in February 1986.

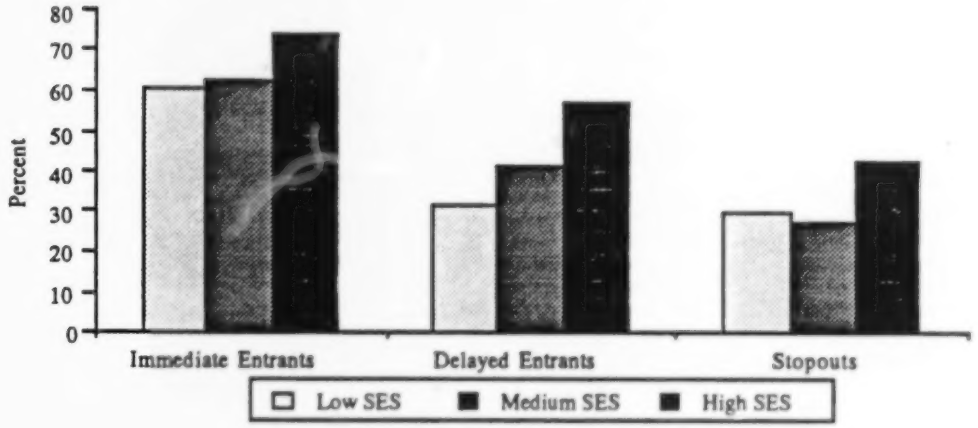
+Not calculated due to low sample size.

SOURCE: NLS-72, 1986 and HS&B, 1986

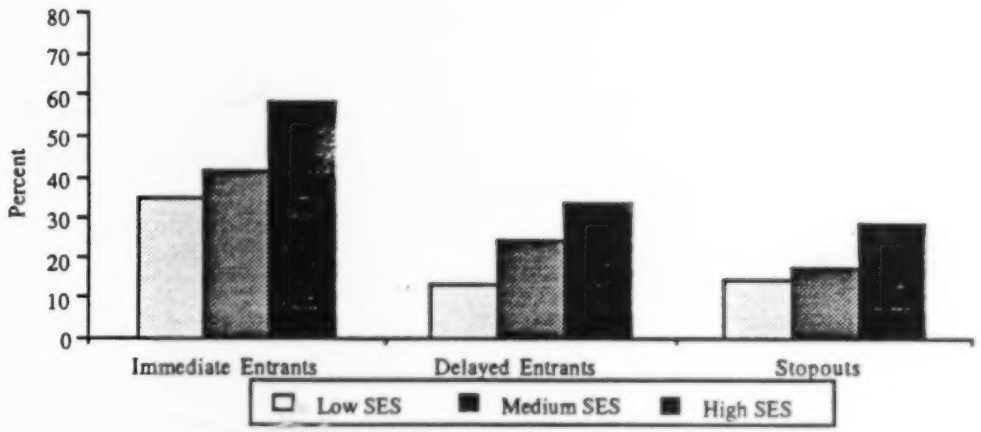
Attainment and Socioeconomic Status

When immediate entrants, delayed entrants, and stopouts were examined separately, the attainment rates for males and females were not significantly different in any type of postsecondary institution. Similarly, socioeconomic status was not related to attainment for students with the same pattern of enrollment at 2-year and less-than-2-year institutions.[13]

Figure 4.--Rates of attainment for immediate entrants, delayed entrants, and stopouts from 4-year institutions:1972 and 1980 high school graduates, by socioeconomic status



1972 Graduates



1980 Graduates

SOURCE: NLS-72, 1986 and HS&B, 1986

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[13] For more information on the attainment rates at different types of postsecondary institutions, see *Consequences of Delay in Postsecondary Education: 1972, 1980, and 1982 High School Graduates*, January 1989, available from the Postsecondary Education Statistics division of the National Center for Education Statistics, Department of Education.

Figure 4 shows that at 4-year institutions, however, higher socioeconomic status was associated with higher rates of attainment for both immediate and delayed entrants. Among the 1972 graduates, 73 percent of immediate entrants with high socioeconomic status received degrees by 1986, compared to 62 percent of the medium SES students and 60 percent of the low SES students who entered immediately. Fifty-seven percent of the high SES students who delayed entry had attained degrees by 1986, compared to 41 percent of the medium SES students and 32 percent of the low SES students. It is also interesting to note that, while higher socioeconomic status is associated with higher stopout rates in 4-year institutions (Table 3), it is also associated with higher rates of attainment in these institutions. Forty-three percent of the high SES students who stopped out from 4-year institutions had attained degrees by 1986, compared to 28 percent of the medium SES students and 30 perc... of the low SES students. High SES students are more likely to stop out than other students, but they are more likely to attain degrees in spite of this enrollment pattern.

Discussion

This report illustrates the diversity of enrollment patterns characterizing students in postsecondary education from three high school cohorts: 1972, 1980, and 1982. Over 40 percent of the high school graduates from these cohorts had enrolled in 4-year institutions by 1986, around 30 percent had enrolled in 2-year institutions, and around 10 percent had enrolled in less-than-2-year institutions.

The diversity of enrollment patterns was also illustrated by the significant numbers of students who delayed their postsecondary education. Two types of delay were studied: (1) delaying entry into postsecondary education at least a full semester after high school graduation, and (2) stopping out for some months or years before returning to postsecondary education. In addition, this report examined the effects of delay on attainment rates. In order to examine delay and its consequences from an institutional perspective, all analysis of delay and its consequences was conducted separately for the population of students who entered each type of postsecondary institution rather than for all students or all high school graduates.

Although many students enrolled in postsecondary education by fall of the year they graduated from high school, a significant number entered later than this. The rates of delayed entry were related to the type of institution: students were more willing to delay beginning shorter postsecondary programs than longer programs. Late entry was least common at 4-year institutions (27 percent for the 1980 graduates) and most common at less-than-2-year institutions (62 percent for the 1980 graduates). The lower rate of delay entering 4-year institutions was especially significant because some students delayed entry at 4-year institutions by beginning at 2-year institutions. Even with this path to college available, approximately two-thirds of the students who entered 4-year institutions did so immediately after high school.

Fewer students delayed by stopping out than by entering late. The stopout rate was also related to the type of institution, but in a different way than was the rate of delay. The lowest stopout rate was found at less-than-2-year institutions (seven percent for the 1980 high school graduates). Stopout rates for the 1980 and 1982 cohorts were higher for students at 4-year than at 2-year institutions, while the stopout rate for the 1972 cohort was higher at 2-year than 4-year institutions. The stopout rate for delayed entrants at 2-year and less-than-2-year institutions did not differ from the stopout rate for immediate entrants, but delayed entrants at 4-year institutions had lower stopout rates than the immediate entrants,

for all three cohorts. In general, shorter programs had fewer stopouts than did longer programs.

Students who delayed entering or who stopped out from each type of postsecondary institution were significantly less likely to earn a degree from such an institution or, in the case of less-than-4-year institutions, to transfer to a 4-year institution. Furthermore, these attainment rates were lower for stopouts than for delayed entrants. These differences are quite large: attainment rates for 1972 graduates at 2-year institutions were 51 percent for immediate entrants, 26 percent for delayed entrants, and 14 percent for stopouts. While the magnitude of these differences varied somewhat by cohort and institution, they characterized students at all three institution types in all three cohorts.

There were few gender differences in the enrollment patterns of students from the 1972, 1980, and 1982 cohorts. Similarly, there were no gender differences in the rate of stopping out or in attainment rates. The only exceptions to this were that males in the 1972 graduating class were more likely than females in that cohort to delay entry into less-than-2-year institutions, while males in the 1980 graduating class were more likely than their female peers to delay entry into 4-year institutions.

In all three cohorts, there was a clear relationship between socioeconomic status and enrollment patterns at 4-year institutions. Students of high socioeconomic status who enrolled in 4-year institutions delayed entry at lower rates and stopped out at higher rates than did medium or low SES students. Despite their lower overall rates of delayed entry into 4-year institutions, a higher proportion of high SES than low or medium SES students delayed their entry into 4-year institutions by beginning at a 2-year or less-than-2-year institution. It appears that the less-than-4-year institutions are most successful with the high SES students at preparing for enrollment in 4-year institutions.

High SES students also had higher attainment rates at 4-year institutions, when enrollment patterns were controlled. The attainment rates for stopouts were higher among high SES than low or medium SES students, and the attainment rates for delayed entrants were also higher among high SES than low or medium SES students. These differences associated with socioeconomic status held true for all three cohorts.

These results indicate that significant numbers of students deviate from the pattern of immediate entry and continuous enrollment through degree attainment. For a variety of reasons, significant numbers of students delayed entry into or stopped out from postsecondary education. While it is fortunate that students take advantage of the continuing opportunity to begin or continue postsecondary education, it is unfortunately true that students who did delay were far less successful than those who did not. Although the negative effects of delay were less important for students of high socioeconomic status than for other students, the significantly lower attainment rates for stopouts and delayed entrants warrants further study of the conditions under which these enrollment patterns are more productive and the support services that might improve attainment rates for these students.

Appendix A

Methodology and Technical Notes

The High School and Beyond Study (HS&B) is a longitudinal data base with a nationally representative probability sample of over 58,000 1980 high school sophomores and seniors. As part of the long-term National Center for Education Statistics data collection program, HS&B provides information available on these students. Both the 1980 senior and sophomore samples were surveyed in 1980, 1982, 1984, and 1986.

The National Longitudinal Study of the High School Class of 1972 (NLS-72) has produced a longitudinal data base with a nationally representative sample of over 22,000 1972 high school seniors. As part of the long-term National Center for Education Statistics data collection program, NLS-72 provides information available on these students. The 1972 senior sample was surveyed in 1972, 1973, 1974, 1976, 1979, and 1986.

The survey samples for both HS&B and NLS-72 were designed to include sufficient students of particular interest in policy questions by over-sampling of schools with high minority populations, alternative public schools, and private schools with high-achieving students. Follow-up surveys retained students in these groups at higher rates than other students.

The base year and follow-up surveys obtained extensive information on each student. Students have reported on such matters as their demographic characteristics, educational experiences, employment experiences, and family formation. In addition, students answered attitudinal questions relating to their self-concept, locus of control, and orientation toward work. Data on high school characteristics and location were also included. These data sets provided all of the information on student characteristics and activities described in this report. For further details concerning the HS&B data, interested readers should consult *High School and Beyond 1980 Senior Cohort Third Follow-Up (1986) Data File User's Manual* (Sebring, P., et al, Chicago: National Opinion Research Center, 1987) and the *High School and Beyond 1980 Sophomore Cohort Third Follow-Up (1986) Data File User's Manual* (Sebring, P., et al, Chicago: National Opinion Research Center, 1987). For further details concerning the NLS-72 data, interested readers should consult *National Longitudinal Study: Base Year (1972) through Fourth Follow-up (1979) Data File Users Manual*, Volume 1-3. (Ricobono, J., et al, Center for Education Research and Evaluation, Research Triangle, Research Triangle Park, N.C. 2709, 1981) and *National Longitudinal Study of the High School Senior Class of 1972 Fifth Follow-Up (1986) Data File User's Manual* (Tourangeau, R., et al, Chicago: National Opinion Research Center, 1987).

In addition to the survey data, the Postsecondary Education Transcript Study was conducted in 1984 for the 1972 high school seniors. This study collected transcripts from academic and vocational postsecondary institutions that respondents reported attending between 1972 and 1979. Data from these transcripts were merged with information reported in the Fifth Follow-up Survey on postsecondary education after 1979 to provide the information on educational enrollment and attainment used in this report. For further details concerning the transcript data, interested readers should consult *National Longitudinal Study of the High School Senior Class of 1972 Postsecondary Education Transcript Study Data File User's Manual* (Jones, C., et al, Chicago: National Opinion Research Center, 1986).

The 11,227 HS&B seniors used as the basis for this report are those who participated in the third follow-up survey in 1986. This was ensured by calculating all estimates with a weight designed for use with HS&B third follow-up data, FU3WT. Some of these students did not participate in all of the previous surveys and are missing some information. When this is the case, these students are excluded from estimates that require that information.

The 13,481 HS&B sophomores used as the basis for this report are those who participated in the third follow-up survey in 1986. This was ensured by calculating all estimates with a weight designed for use with HS&B third follow-up data, FU3WT. Some of these students did not participate in all of the previous surveys and are missing some information. When this is the case, these students are excluded from estimates that require that information.

The 12,841 NLS-72 seniors used as the basis for this report are those who participated in the fifth follow-up survey in 1986. This was ensured by calculating all estimates with a weight designed for use with NLS-72 fifth follow-up data, FU5WT. Some of these students did not participate in all of the previous surveys and are missing information on particular variables. When this is the case, these students are excluded from estimates that require that information.

Accuracy of Estimates

The statistics in this report are estimates derived from a sample. Two broad categories of error occur in such estimates: sampling and nonsampling errors. Sampling errors happen because observations are made only on samples of students, not on entire populations. Nonsampling errors happen not only in surveys of sample groups but also in complete censuses of entire populations.

Nonsampling errors can be attributed to a number of sources: inability to obtain complete information about all students in all schools in the sample (some students or schools refused to participate, or students participated but answered only certain items); ambiguous definitions; differences in interpreting questions; inability or unwillingness to give correct information; mistakes in recording or coding data; and other errors of collecting, processing, sampling, and estimating missing data.

The accuracy of a survey result is determined by the effect of sampling and nonsampling errors. In surveys with sample sizes as large as those in the HS&B study, sampling errors generally are not the primary concern, except where separate estimates are made for relatively small subpopulations such as Asian-Americans or American Indians. In this report, small sample sizes were not usually a problem.

The nonsampling errors are difficult to estimate. The major sources of nonsampling error considered were nonresponse bias and the reliability and validity of the data. The HS&B instrument response rates were all above 85 percent and the item response rates within instruments, for the items use to develop the estimates in this report, were above 95 percent. The weights used to calculate the estimates were constructed in a fashion that compensated for instrument nonresponse. Earlier investigations of nonresponse bias found no major problems (see *High School and Beyond First Follow-up (1982) Sample Design Report*, by Tourangeau R., et al, Chicago: National Opinion Research Center, 1983).

The reliability and validity of the HS&B data have been examined in *Quality of Responses of High School Student to Questionnaire Items* (Fetters, W., et al, Washington: National Center for Education Statistics, 1984). This study found that the reliability and validity of responses vary considerably depending on the item and the characteristics of the respondent. Contemporaneous, objective, and factually-oriented items were more reliable and valid than subjective, temporally remote, and ambiguous items. Older, white, or high-achieving students provided more reliable and valid responses than did younger, minority

group, or low-achieving students. The estimates in this publication are reasonably reliable and valid.

Statistical Procedures

The descriptive comparisons in this report were based on **Student's t** statistics. Comparisons based on the tables include the estimates of the probability of a Type I error, or significance level. The significance levels were determined by calculating the **Student's t** values for the differences between each pair of means or proportions and comparing these to published tables of significance levels for two-tailed hypothesis testing.

HS&B and NLS-72 samples, while representative and statistically accurate, are not simple random samples. Students were initially selected within high schools grouped within strata. Sampling rates for schools within different strata varied, resulting in better data for policy purposes, but at a cost to statistical efficiency. Hence, simple random techniques for the estimation of standard errors frequently underestimate the true standard errors for some estimates. To overcome this problem, standard errors for all estimates in this tabulation were calculated using Taylor residual techniques. Standard errors and unweighted Ns are included in the appendix in each descriptive table for interested readers. All estimates, standard errors, unweighted n's and weighted n's are available from the Longitudinal Studies Branch in comma separated form for use with all major spreadsheet software and micro computers.

Student's t values may be computed for comparisons using these tables' estimates with the following formula:

$$t = P_1 - P_2 \; / \; \mathrm{SQRT}\,(se_1^2 + se_2^2)$$

where P_1 and P_2 are the estimates to be compared and se_1 and se_2 are their corresponding standard errors.

There are hazards in reporting statistical tests for each comparison. First, the test may make comparisons based on large **t** statistics appear to merit special attention. This can be misleading, since the magnitude of the **t** statistic is related not only to the observed differences in means or percentages but also to the number of students in the specific categories used for comparison. Hence, a small difference compared across a large number of students would produce a large **t** statistic.

A second hazard in reporting statistical tests for each comparison is that, when making multiple comparisons among categories of an independent variable, for example, different levels of income, the probability of a Type I error for these comparisons taken as a group is larger than the probability for a single comparison. When more than one difference between groups of related characteristics or "families" are tested for statistical significance, we must apply a standard that assures a level of significance for all of those comparisons taken together.

In order to reduce the probability of Type I error in a set of multiple comparisons, Bonferroni intervals based on families of **Student's t** tests were calculated. Families of tests were defined as pairwise tests comparing an outcome for two or more related categories of students. For example, a comparison of enrollment for males and females comprises a family of tests, with only one comparison (males v. females). Comparisons of

enrollment rates for black, Hispanic, and white students comprise another family of tests, with three comparisons possible (black v. white, black v. Hispanic, and white v. Hispanic).

The width of a Bonferroni interval depends upon the number of comparisons actually made within a family. When only one pairwise comparison is made, the Bonferroni interval is the same as the confidence interval obtained from a **Student's t** test. The more comparisons that are made, the narrower the Bonferroni interval and thus the greater the **t** statistic needed for each difference to guarantee a significance level less than or equal to .05 for all of the comparisons taken together.[13]

Comparisons were made in this report only when $p \leq .05 / k$ for a particular pairwise comparison, where that comparison was one of k tests within a family. This guarantees both that the individual comparison would have $p \leq .05$ and that when k comparisons were made within a family of possible tests, the significance level of the comparisons would sum to $p \geq .05$.[14]

For example, in a comparison of enrollment for males and females, only one comparison is possible (males v. females). In this family, $k = 1$, and the comparison can be evaluated with a **Student's t** test. When students are divided into three racial/ethnic groups and all possible comparisons are made, then $k = 3$ and the significance level of each test must be $p \geq 05/3$, or .0167. In this report, when comparisons are made between rates of delayed entry in three different types of postsecondary institutions, then $k = 3$ and the significance level of each test must be $p \geq 05/3$, or .0167, in order to be considered statistically significant. Comparisons among four categories of income or other independent variable would comprise a third family of tests, where $k = 6$ when all comparisons are made.

Percentage Bases Used in This Report

For each cohort, information is provided on two types of delay in postsecondary education: initial delay and stopping out. In addition, attainment rates are shown for students with each type of enrollment pattern at each type of postsecondary institution. This information is provided for each cohort for the period spanning from their high school graduation to February 1986. For Figures 1 through 4 and for Tables 2 through 5, the base for each percentage reported consists of all cohort members who graduated in that year (1972, 1980, or 1982) and who enrolled in that type of institution by 1986.

Table 1 shows the percentage of graduates in each cohort who enrolled in various types of postsecondary education by 1986: any postsecondary institution, less-than-2-year institutions, 2-year institutions, and 4-year institutions. Since students may enroll in more than one type of institution, the sum of the percentage enrolling in each type of institution is always larger than the percentage enrolling in some form of postsecondary education. The base for each percentage reported in Table 1 consists only of those cohort members who graduated with their class.

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[13] For a discussion of family-wise error rates, see Alan J. Klockars and Gilbert Sax, *Multiple Comparisons*, Beverly Hills, CA: Sage Publications, 1986, p.17.

[14] The standard that $p \leq .05/k$ for each comparison is more stringent than the criterion that the significance level of the comparisons should sum to $p \leq .05$. For tables showing the t statistic required to insure that p

Appendix B

Glossary

≤.05/k for a particular family size and degrees of freedom, see Oliver Jean Dunn, "Multiple Comparisons Among Means," *Journal of the American Statistical Association*, 56: 52-64.

4-year institution	postsecondary institution offering 4-year programs leading to the Bachelor's degree
2-year institution	postsecondary institution offering programs of less than four years that lead to the Associate degree or to a vocational certificate
Less-than-2-year institution	postsecondary institution offering programs of less than two years that lead to a vocational certificate
Immediate entrants	students who enrolled in postsecondary education by October of the year they were scheduled to graduate from high school
...at 4-year institutions	entered a 4-year institution by October of the graduation year
...at 2-year institutions	entered a 2-year institution by October of the graduation year
...at less-than-2-year institutions	entered a less-than-2-year institution by October of the graduation year
Delayed entrants	students who enrolled in postsecondary education after October of the year they were scheduled to graduate from high school
...at 4-year institutions	delayed entering a 4-year institution; may or may not have enrolled in another type of institution as immediate entrant
...at 2-year institutions	delayed entering a 2-year institution; may or may not have enrolled in another type of institution as immediate entrant
...at less-than-2-year institutions	delayed entering a less-than-2-year institution; may or may not have enrolled in another type of institution as immediate entrant

Stopouts	students who took a break from school for at least two months of the academic year. After this break from school, they returned to that type of institution for at least two months. (Stopout status is independent of initial entry time: stopouts may have been either immediate or delayed entrants.) (Stopout status is independent of final degree attained, except that students are classified as stopouts only if they did not receive a degree from the institution they were attending before the gap in enrollment.)
...at 4-year institutions	stopped out from a 4-year institution; did not attain a Bachelor's degree before taking the break; may or may not have attended elsewhere during the gap in enrollment
...at 2-year institutions	stopped out from a 2-year institution; did not attain an Associate degree before taking the break; may or may not have attended elsewhere during the gap in enrollment
...at less-than-2-year institutions	stopped out from a 2-year institution; did not attain a vocational certificate before taking the break; may or may not have attended elsewhere during the gap in enrollment
Degree attainers	students who earned degrees at the type of postsecondary institution in which they enrolled, except that students who earned Associate degrees from 4-year institutions were not considered degree attainers
...at 4-year institutions	earned Bachelor's degrees
...at 2-year institutions	earned Associate degrees or vocational certificates, or transferred to a 4-year institution
...at less-than-2-year institutions	earned vocational certificates, or transferred to a 4-year institution

Socioeconomic status (SES) a measure of family background that combines occupation, income, and education information for the student's family.

The measure used in this report is based on an index created by the Research Triangle Institute for the NLS-72 surveys and used by the National Opinion Research Corporation for the HS&B surveys. This index gives equal weight to five student characteristics: mother's education, father's education, family income, occupational status of the father's occupation, and possessions in the home.

Students were categorized as "low SES" if they ranked in the bottom quartile on the SES index and as "high SES" if they ranked in the top quartile on this index. Students who ranked between the twenty-fifth and the seventy-fifth percentiles were categorized as "medium SES."

More information on the construction of the SES index can be obtained from John Riccobono, *et al, National Longitudinal Study: Base Year (1972) through Fourth Follow-Up (1979) Data File Users Manual*, Appendix K, Volume II, June 1981.

Appendix C

Supporting Tables

The following pages provide the percentages, standard errors, and unweighted N's for all data shown in Figures 1 through 4 and Tables 1 through 5.

Table C.1.--Estimates for Table 1
Enrollment in postsecondary institutions: Percent of 1972, 1980, and 1982 high school graduates enrolled by 1986

	Total percent ever in PSE	Total percent in less-than-2-year institution	Total percent in 2-year institution	Total percent in 4-year institution
		1972 Graduates		
Total	68.23	9.05	30.16	47.65
s.e.	0.883	0.402	0.857	0.914
unwt n	8946	8946	8946	8946
Male	69.46	8.91	28.83	49.89
s.e.	1.318	0.542	1.143	1.309
unwt n	4213	4213	4213	4213
Female	67.06	9.19	31.42	45.52
s.e.	1.149	0.524	1.089	1.180
unwt n	4733	4733	4733	4733
Low SES	47.95	9.13	23.27	26.01
s.e.	1.754	0.729	1.255	1.339
unwt n	2124	2124	2124	2124
Medium SES	65.75	9.75	30.91	42.89
s.e.	1.230	0.577	1.180	1.219
unwt n	4182	4182	4182	4182
High SES	91.11	7.67	34.88	76.07
s.e.	0.937	0.584	1.55	1.374
unwt n	2631	2631	2631	2631
		1980 graduates		
Total	71.18	13.26	29.95	45.90
s.e.	0.789	0.548	0.826	0.913
unwt n	9887	9887	9887	9887
Male	69.26	11.38	28.39	46.30
s.e.	1.110	0.717	1.110	1.226
unwt n	4435	4435	4435	4435
Female	72.94	14.99	31.38	45.52
s.e.	0.965	0.733	1.032	1.129
unwt n	5452	5452	5452	5452

Table C.1.--Estimates for Table 1
Enrollment in postsecondary institutions: Percent of 1972, 1980, and 1982 high school graduates enrolled by 1986--continued

	Total percent ever in PSE	Total percent in less-than-2-year institution	Total percent in 2-year institution	Total percent in 4-year institution
	1980 graduates (continued)			
Low SES	54.92	15.35	23.67	25.83
s.e.	1.342	0.974	1.151	1.139
unwt n	3401	3401	3401	3401
Medium SES	71.36	14.48	31.40	43.35
s.e.	0.999	0.800	1.059	1.054
unwt n	4062	4062	4062	4062
High SES	90.96	10.20	32.93	74.45
s.e.	0.964	0.933	1.615	1.534
unwt n	1844	1844	1844	1844
	1982 graduates			
Total	66.98	13.17	27.05	40.95
s.e.	0.691	1.934	0.72	0.781
unwt n	10526	1298	10526	10526
Male	63.78	11.00	24.42	41.38
s.e.	0.972	0.643	0.902	1.040
unwt n	4949	4949	4949	4949
Female	69.89	15.15	29.45	40.55
s.e.	0.889	0.696	0.893	0.972
unwt n	5577	5577	5577	5577
Low SES	44.04	13.94	19.55	17.80
s.e.	1.375	1.010	1.117	1.025
unwt n	2531	2531	2531	2531
Medium SES	66.55	15.71	29.17	36.40
s.e.	0.864	0.746	0.932	0.900
unwt n	5022	5022	5022	5022
High SES	88.00	7.65	29.79	69.88
s.e.	0.966	0.692	1.406	1.395
unwt n	2925	2925	2925	2925

Table C.2.--Estimates for Table 2 and Figure 1
Rates of delayed entry into postsecondary institutions for 1972, 1980, and 1982 high school graduates, by sex and socioeconomic status

	Delayed entry at less-than-2-year institution	Delayed entry at 2-year institution	Delayed entry at 4-year institution
	1972 Graduates		
Total	66.25	53.87	34.85
s.e.	1.913	1.498	1.081
unwt n	835	2805	5058
Male	71.07	51.78	33.52
s.e.	2.574	2.182	1.294
unwt n	376	1275	2547
Female	61.8	55.7	36.23
s.e.	2.5	2.028	1.71
unwt n	459	1530	2511
Low SES	67.15	61.45	51.19
s.e.	3.607	2.905	2.615
unwt n	213	573	711
Medium SES	61.71	52.84	38.16
s.e.	2.689	1.978	1.656
unwt n	434	1381	2184
High SES	76.36	51.12	26.33
s.e.	3.513	2.665	1.558
unwt n	188	850	2162
	1980 graduates		
Total	61.73	48.07	26.97
s.e.	1.871	1.369	1.062
unwt n	1397	3174	4707
Male	64.18	47.82	29.46
s.e.	2.888	1.957	1.541
unwt n	536	1382	2132
Female	60.01	48.28	24.63
s.e.	2.492	1.868	1.368
unwt n	861	1792	2575

Table C.2.--Estimates for Table 2 and Figure 1
Rates of delayed entry into postsecondary institutions for 1972, 1980, and 1982 high school graduates, by sex and socioeconomic status--continued

	Delayed entry at less-than-2-year institution	Delayed entry at 2-year institution	Delayed entry at 4-year institution
	1980 graduates (continued)		
Low SES	63.25	47.47	33.53
s.e.	3.317	2.587	2.232
unwt n	526	962	1146
Medium SES	59.26	46.83	28.29
s.e.	2.628	1.956	1.494
unwt n	609	1405	1965
High SES	67.66	48.35	21.49
s.e.	4.247	2.826	1.572
unwt n	182	645	1405
	1982 graduates		
Total	54.94	42.41	23.77
s.e.	1.934	1.235	0.874
unwt n	1298	3140	5099
Male	55.27	44.45	25.14
s.e.	3.015	1.916	1.289
unwt n	509	1393	2414
Female	54.73	40.86	22.5
s.e.	2.326	1.611	1.066
unwt n	789	1747	2685
Low SES	49.02	49.5	31.72
s.e.	3.808	2.947	2.715
unwt n	348	625	690
Medium SES	57.53	41.05	28.27
s.e.	2.482	1.672	1.31
unwt n	722	1618	2234
High SES	54.89	40.85	17.69
s.e.	4.504	2.354	1.115
unwt n	218	887	2166

Table C.3.--Estimates for Figure 2
Percent of students enrolling in 4-year institutions after transferring from immediate enrollment in 2-year or less-than-2-year institutions: 1972, 1980, and 1982 high school graduates

	1972 graduates	1980 graduates	1982 graduates
Total	6.76	6.16	5.00
s.e.	0.429	0.381	0.294
unwt n	8946	9887	10526
Low SES	3.37	3.78	2.39
s.e.	0.4	0.507	0.366
unwt n	2124	3401	2531
Medium SES	6.81	6.79	5.31
s.e.	0.514	0.563	0.397
unwt n	4182	4062	5022
High SES	9.67	8.25	6.71
s.e.	1.14	0.921	0.65
unwt n	2631	1844	2925

Table C.4.--Estimates for Table 3 and Figure 3
Rates of stopping out from postsecondary institutions for 1972, 1980, and 1982 high school graduates, by different sex and socioeconomic status

	Less-than-2-year institutions	2-year institutions	4-year institutions
	1972 graduates		
Total	13.16	32.22	26.61
s.e.	1.352	1.235	1.067
unwt n	852	2874	5128
Male	13.88	31.62	26.16
s.e.	1.967	1.789	1.481
unwt n	381	1292	2572
Female	12.51	32.74	27.08
s.e.	1.803	1.669	1.464
unwt n	471	1582	2556
Low SES	11.94	34.54	25.22
s.e.	2.465	2.822	2.198
unwt n	227	594	732
Medium SES	12.68	32.41	28.5
s.e.	1.777	1.657	1.831
unwt n	436	1417	2219
High SES	15.74	30.52	24.98
s.e.	2.692	2.159	1.331
unwt n	189	862	2176
	1980 graduates		
Total	6.67	15.26	26.72
s.e.	1.126	0.964	0.927
unwt n	1370	3104	4748
Male	6.44	14.78	27.54
s.e.	1.695	1.397	1.329
unwt n	528	1357	2151
Female	6.82	15.66	25.96
s.e.	1.358	1.328	1.323
unwt n	842	1747	2597

Table C.4.--Estimates for Table 3 and Figure 3
Rates of stopping out from postsecondary institutions for 1972, 1980, and 1982 high school graduates, by different sex and socioeconomic status--continued

	Less-than-2-year institutions	2-year institutions	4-year institutions
	1980 graduates (continued)		
Low SES	6.63	14.67	22.8
s.e.	1.666	1.755	1.747
unwt n	515	935	1171
Medium SES	6.49	15.05	24.84
s.e.	1.413	1.314	1.325
unwt n	597	1385	1983
High SES	3.09	14.97	29.68
s.e.	1.554	1.861	1.545
unwt n	178	626	1404
	1982 graduates		
Total	4.74	14.56	30.47
s.e.	0.673	0.807	0.889
unwt n	1321	3203	5192
Male	4.2	14.56	30.25
s.e.	1.039	1.298	1.338
unwt n	524	1421	2461
Female	5.1	14.56	30.67
s.e.	0.907	1.095	1.19
unwt n	797	1782	2731
Low SES	4.84	12.61	21.29
s.e.	1.378	1.811	2.235
unwt n	353	637	710
Medium SES	4.95	14.16	27.51
s.e.	0.925	1.087	1.307
unwt n	734	1645	2272
High SES	4.14	16.48	35.45
s.e.	1.571	1.681	1.325
unwt n	222	905	2197

Table C.5.--Estimates for Table 4
Rates of stopping out from postsecondary institutions for immediate and delayed entrants: 1972, 1980, and 1982 high school graduates

	Immed entry less-than-2-yr: pct stopout	Delayed entry less-than-2-yr: pct stopout	Immed entry 2-yr: pct stopout	Delayed entry 2-yr: pct stopout	Immed entry 4-yr: pct stopout	Delayed entry 4-yr: pct stopout
			1972 graduates			
Total	10.81	14.27	32.4	32.07	28.36	23.61
s.e.	2.119	1.66	1.972	1.505	1.383	1.584
unwt n	267	585	1282	1592	3383	1745
Male	13.2	14.14	35.71	27.94	28.21	22.39
s.e.	3.544	2.302	2.721	2.154	2.102	1.622
unwt n	106	275	634	658	1688	884
Female	9.14	14.41	29.27	35.37	28.52	24.77
s.e.	2.399	2.384	2.773	1.891	1.683	2.582
unwt n	161	310	648	934	1695	861
Low SES	9.69	12.93	37.43	32.83	27.36	23.41
s.e.	4.183	2.95	6.036	2.544	2.788	3.221
unwt n	69	158	227	367	386	346
Medium SES	11.31	13.45	31.35	33.31	30.96	24.83
s.e.	2.723	2.344	2.165	2.376	2.44	2.543
unwt n	156	280	678	739	1378	841
High SES	10.46	17.37	31.78	29.36	26.2	21.78
s.e.	5.042	3.265	3.803	2.344	1.645	2.23
unwt n	42	147	377	485	1618	558
			1980 graduates			
Total	8.54	5.51	15.21	15.31	28.35	22.49
s.e.	2.189	1.062	1.389	1.36	1.113	1.758
unwt n	456	914	1601	1503	3441	1307
Male	8.47	5.3	17.07	12.34	30.54	20.83
s.e.	3.006	1.696	2.139	1.78	1.643	2.247
unwt n	170	358	691	666	1510	641
Female	8.58	5.66	13.63	17.79	26.47	24.42
s.e.	2.667	1.369	1.764	2.003	1.51	2.774
unwt n	286	556	910	837	1931	666

Table C.5.--Estimates for Table 4
Rates of stopping out from postsecondary institutions for immediate and delayed entrants: 1972, 1980, and 1982 high school graduates--continued

	Immed entry less-than-2-yr: pct stopout	Delayed entry less-than-2-yr: pct stopout	Immed entry 2-yr: pct stopout	Delayed entry 2-yr: pct stopout	Immed entry 4-yr: pct stopout	Delayed entry 4-yr: pct stopout
			1980 graduates (continued)			
Low SES	6.07	6.95	15.61	13.65	24.53	19.59
s.e.	2.422	2.176	2.733	2.216	2.189	3.107
unwt n	173	342	461	474	801	370
Medium SES	6.83	6.26	15.29	14.79	27.06	19.31
s.e.	2.241	1.673	1.862	1.79	1.614	2.24
unwt n	212	385	724	661	1423	560
High SES	3.97	2.67	15.18	14.74	31.07	24.89
s.e.	3.279	1.675	2.375	2.784	1.795	3.256
unwt n	49	129	342	284	1089	315
			1982 graduates			
Total	4.43	4.98	15.72	13.06	35.2	16.43
s.e.	2.467	2.516	1.623	2.005	1.042	1.384
unwt n	571	750	1804	1399	3931	1261
Male	33.63	41.18	41.54	50.36	34.86	17.47
s.e.	4.097	3.794	2.529	2.827	1.599	2.099
unwt n	221	303	767	654	1849	612
Female	35.36	41.13	43.36	57.73	35.5	15.37
s.e.	3.179	3.331	2.296	2.61	1.417	1.778
unwt n	350	447	1037	745	2082	649
Low SES	6.4	3.25	13.48	11.76	25.96	11.95
s.e.	2.365	1.386	2.785	2.377	2.899	3.033
unwt n	161	192	329	308	499	211
Medium SES	3.96	5.66	15.41	12.42	31.91	16.89
s.e.	1.302	1.307	1.487	1.593	1.621	2.054
unwt n	316	418	966	679	1636	636
High SES	3.02	5.04	17.4	15.21	39.79	17.23
s.e.	2.044	2.073	2.166	2.468	1.495	2.511
unwt n	89	133	503	402	1790	407

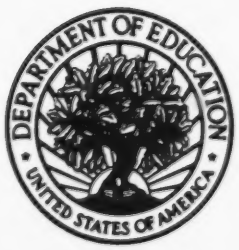
Table C.6.--Estimates for Table 5 and Figure 4. Attainment in postsecondary institutions for immediate entrants, delayed entrants, and stopouts: 1972, 1980, and 1982 high school graduates

	Less-than-2-year institutions			2-year institutions			4-year institutions		
	Immed	Delay	Stopout	Immed	Delay	Stopout	Immed	Delay	Stopout
				1972 graduates					
Total	59.33	37.97	16.69	50.89	25.69	14.28	67.3	44.12	33.72
s.e.	3.372	2.462	3.711	2.235	1.684	1.24	1.251	1.93	2.216
unwt n	267	585	115	1282	1592	942	3383	1745	1239
Male	61.19	38.88	12.28	48.35	29.24	15.72	68.93	46.87	36
s.e.	5.111	3.202	4.773	2.694	2.952	1.963	1.799	2.099	3.579
unwt n	106	275	51	634	658	419	1688	884	597
Female	58.04	37.05	21.09	53.29	22.87	13.07	65.52	41.51	31.45
s.e.	4.461	3.672	5.385	3.404	1.592	1.615	1.747	3.199	2.439
unwt n	161	310	64	648	934	523	1695	861	642
Low SES	51.04	34.89	17.08	45.35	25.85	12.09	60.46	31.78	29.78
s.e.	6.839	4.365	8.214	5.053	2.599	2.664	2.914	3.646	3.718
unwt n	69	158	26	227	367	199	386	346	182
Medium SES	62.9	37.08	9.7	50.29	26.86	16.57	62.15	41.02	27.55
s.e.	4.095	3.707	3.855	2.582	2.826	1.811	2.25	2.59	3.502
unwt n	156	280	58	678	739	482	1378	841	535
High SES	57.53	43	30.69	54.44	23.53	11.6	73.39	56.77	42.73
s.e.	8.448	4.348	8.802	4.688	2.032	2.175	1.542	3.213	3.323
unwt n	42	147	31	377	485	261	1618	558	522
				1980 graduates					
Total	58.98	49.72	10.36	53.18	22.09	14.22	49.3	24.98	21.3
s.e.	3.187	2.524	5.182	1.911	1.574	2.191	1.315	1.843	1.738
unwt n	456	914	88	1601	1503	504	3441	1307	1263
Male	49.21	47.1	2.45	51.1	24.34	14.1	48.12	26.74	20.02
s.e.	5.169	3.844	1.84	3.05	2.483	3.061	1.875	2.533	2.491
unwt n	170	358	34	691	666	224	1510	641	616
Female	65.23	51.68	15.64	54.95	20.21	14.32	50.31	22.94	22.57
s.e.	3.895	3.227	8.127	2.355	2.067	3.198	1.686	2.405	2.429
unwt n	286	556	54	910	837	280	1931	666	647

Table C.6.--Estimates for Table 5 and Figure 4. Attainment in postsecondary institutions for immediate entrants, delayed entrants, and stopouts: 1972, 1980, and 1982 high school graduates--continued

	Less-than-2-year institutions			2-year institutions			4-year institutions		
	Immed	Delay	Stopout	Immed	Delay	Stopout	Immed	Delay	Stopout
			1980 graduates (continued)						
Low SES	53.35	37.7	5.18	43.91	21	14.42	34.61	13.74	14.91
s.e.	5.256	4.034	3.145	3.766	3.084	4.877	2.589	2.761	3.108
unwt n	173	342	34	461	474	156	801	370	280
Medium SES	62.78	55.51	10.03	52.68	21.23	11.45	41.77	24.62	17.87
s.e.	4.303	3.774	5.987	2.586	2.229	2.823	1.803	2.614	2.329
unwt n	212	385	39	724	661	227	1423	560	522
High SES	65.4	49.31	†	60.41	25.76	20.65	58.64	33.49	28.65
s.e.	8.242	6.013	†	3.526	3.136	5.202	1.95	3.448	3.183
unwt n	49	129	8	342	284	94	1089	315	404
			1982 graduates						
Total	62.67	44.94	15.45	41.47	17.4	8.21	*	*	*
s.e.	2.529	2.359	5.281	1.648	1.461	1.537			
unwt n	571	750	73	1804	1399	518			
Male	64.72	41.09	13.61	42.77	20.1	10.48	*	*	*
s.e.	4.168	3.856	7.963	2.441	2.342	2.795			
unwt n	221	303	26	767	654	219			
Female	61.32	47.58	16.47	40.55	15.21	6.5	*	*	*
s.e.	3.265	3.245	6.903	2.128	1.715	1.662			
unwt n	350	447	47	1037	745	299			
Low SES	59.65	55.65	28.44	32.8	19.59	4.21	*	*	*
s.e.	5.182	5.267	13.8	3.687	3.831	1.779			
unwt n	161	192	23	329	308	98			
Medium SES	63.61	38.96	11.77	40.62	17.73	6.22	*	*	*
s.e.	3.163	3.044	5.871	2.12	2.068	1.969			
unwt n	316	418	38	966	679	257			
High SES	64.34	54.66	†	47.47	15.42	13.16	*	*	*
s.e.	6.165	5.368	†	3.235	2.232	3.408			
unwt n	89	133	12	503	402	160			

†Not calculated due to small sample size.
*Estimates on attainment for 4-year institutions not reported. The last survey was conducted in February 1986, less than four full years after these students graduated from high school.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